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## SOME RECORDS OF BREEDING AFTER LATE RAINS IN THE HAMERSLEY REGION\*

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At the end of April in 1966 the Hamersley region of Western Australia had a period of unseasonable and heavy rain. The fourth phase of the Harold Hall Australian Expedition collected bird specimens in this region in May and early June. In the period May 4-7, when we travelled up the inland road via Meekatharra and Mundiwindi, we found evidence of superficial flooding only a short while before, and surface water everywhere in a region which had previously experienced a number of dry years. Water was flowing in some of the creeks.

During the period May 11-27 the expedition camped on Coolawanyah Station, on the low hills of the Chichester range bordering the Fortescue River on the north side. In the period May 27-June 6 we camped on the Maitland River and Karratha Station. In both places surface water was available over large areas, although the smaller pools and creeks were beginning to dry up by late May. The rain had brought on a rapid growth of grass and small herbaceous plants, and at Karratha thick stands of grass covered much of the coastal plain. We collected samples of a wide range of bird species for preparation as museum specimens and evidence of breeding, apparently in response to condition following the rain, was found in a number of species.

Spinifex Pigeon, Lophophaps ferruginea. One bird had a clutch of two freshly laid eggs on almost bare ground by the side of a clump of porcupine grass in mid-May at Coolawanyah. Others were seen in small parties and it was difficult to be certain what these were doing.

Budgerygah, *Melopsittacus undulatus*. These birds were present in pairs and small parties in the trees along the creeks and appeared to be about to nest or in process of nesting.

Narrow-billed Bronze Cuckoo, *Chrysococcyx basalis*. A female collected at Coolawanyah on May 12 had several large yolk sacs and appeared to be within a day or two of laying.

White-winged Triller, *Lalage sucurii*. A female collected on the Fortescue River on May 18 had one large yolk sac, indicating breeding.

Rufous Song-lark, Cinclorhamphus mathewsi. Continual loud song from well-spaced males together with some aggressive chasing, and large gonads in birds that were collected, suggested that this species was breeding.

Banded Plover, Zonifer tricolor. A pair were present near the camp at Coolawanyah. The female was collected on May 13

<sup>\*</sup> Results of the Harold Hall Australian Expedition, No. 19. The previous number in this series will appear in The Emu.

and found to be in breeding condition, the ovaries being well developed but no definite eggs in process of formation.

Blue-and-white Wren, *Malurus leuconotus*. Males collected at Coolawanyah had very large gonads, suggesting breeding. Similar-sized gonads were also present in brown-plumaged birds showing no blue-and-white colour. Two parties of individuals had small, short-tailed young only a few days out of the nest.

Variegated Wren, *Malurus lamberti*. A male collected at Tambrey on May 17 had very large gonads, and in the same area a family party with recently-fledged young was seen.

Golden-backed Honeyeater, *Melithreptus laetior*, Several collected on May 20 at Coolawanyah had small gonads, but a trio collected on May 23 only a few miles away consisted of two males with very large gonads and a female with two well-developed yolk sacs indicated imminent breeding.

(In contrast to other meliphagid species, specimens of the Brown Honeyeater, *Lichmera indistincta*, and White-plumed Honeyeater, *Mcliphaga penicillata*, were also found to have weli-developed gonads; and frequent song was heard from both species, suggesting that breeding might occur, but no further evidence was obtained.)

Australian Pipit, Anthus novaeseelandiae. Specimens collected had well-developed gonads. Towards the end of the period at Coolawanyah a pair were found with a nest containing half-grown young and it was estimated that they would have been about half-way through incubation when we arrived. During late May at Karratha different pairs were seen carrying food to young, although the latter may have been out of the nest by them.

Singing Bushlark, *Mirafra javanica*. Birds were singing over open areas where grass had recently grown at Coolawanyah. The gonads of those collected were large and a female collected on May 14 had a fully-formed yolk-sac. At Karratha on May 30 a juvenile with most of the wing and tail feathers fully grown was collected. Other, recently fledged, juveniles were seen on the grass flats in the same area.

Star Finch, *Bathilda ruficauda*. At Karratha these were present in pairs and small parties in the rushy growth along the creeks. Of a few collected on May 28 the male showed large gonads and one female had a fully-developed yolk-sac, indicating that breeding was occurring. Painted Finches, *Emblema picta*, present in the same area showed no evidence of breeding activity and had small gonads, as did those collected at Coolawanyah.

Zebra Finch, *Taeniopygia eastanotis*. Birds at Coolawanyah had young that were still partially dependent on the parents. There was considerable song from males in small parties that came to drink, but no actual evidence of nesting.

## WHITE-HEADED STILT NESTING NEAR PERTH

By B. HUTCHISON, Woodlands.

During my activities in a bird-banding survey at Herdsman's Lake I have often recorded parties of White-headed Stilts (Himantopus himantopus) from August to November. In 1967 a party of six birds were noted on a flooded paddock (Location A on map). These birds were first seen on August 8 and persisted in the locality.

On September 23 and the week-end previously I was surprised to find the birds aggressive, flying at intruders and using the